
Hood for use with a disposable or reusable lavatory tray

For pet owners, especially cat owners, who keep their pets mainly or only indoors, it is necessary to provide the animal with a lavatory. This as a rule consists of a deep tray filled with an absorbent material, known as litter. Apart from the litter available commercially, it is also possible to use sand or home-made material produced from newspapers, paper handkerchiefs and the like.

Since cats in particular have a habit of scratching in the litter, many cat lavatories have a hood-like cover which prevents soiling of the surrounding area. At regular intervals, it is necessary not only to remove the lumps of cat litter separately, but also to clean out the entire lavatory thoroughly as a precaution against infections for the pet.

The state of the art includes numerous cat lavatories with appropriate hoods, which are found both in the form of disposable versions and as hard plastic types for permanent use.

US patent no. 4,986,217 discloses a disposable cat lavatory containing fresh cat litter which is offered to the customer in a folded form and can be made ready for use by simply unfolding it. In this context, the lower part of the cat lavatory is formed from relatively rigid wall elements and a corresponding base plate which extend upwards into walls that can be folded down. As becomes clear in the illustrations, after the lid is removed, the walls are raised and the cat lavatory can be closed with a lid in order to stabilise and strengthen the walls, this lid being very similar to the lower part of the construction. After use, this cat lavatory, which is not unlike a shoe box, can be folded up and sealed with the original lid, so that the cat owner does not need to come into contact either with the animal's faeces or with the cat litter when disposing of the lavatory. The hood-like cover is irreversibly connected to the base of the cat lavatory.

US patent no. 5,014,649 discloses a cat lavatory made of cardboard. In this context, it is specifically mentioned that it need not necessarily be a disposable lavatory, though the entire device, including the soiled cat litter, can indeed be disposed of by folding the construction

together. As becomes clear in the illustrations, this is a cat lavatory consisting of a lower part, which preferably contains a vapour lock, and a foldable hood. It should be borne in mind here that the walls on the long sides of the device are connected both to the lower part and to the roof. The walls on the short sides, on the other hand, are connected only to the lower part and, when the walls on the long sides have been raised, the walls on the short sides have to be folded out and locked into the roof. The lower part and the hood are thus irreversibly connected together *a priori* via the walls on the long sides.

The French patent application FR 2618050 discloses a disposable cat lavatory consisting of a semi-rigid board material. Here, at least one of the walls on the long sides of the lower part possesses a side wall which can be folded out, and which makes it possible to erect a house-like structure over the base. The entire device consists of a single strip of cardboard and is set up with the aid of parts that can be folded together and tabs that can be inserted. In the transport stage, on the other hand, the folded cat lavatory assumes a height which corresponds at least to the height defined by the portion in which the litter is located once the unit has been erected.

US patent no. 6,371,048 discloses a cat lavatory consisting of two parts, a top part and a matching hood. Particular emphasis should be placed on a ramp, which leads into the relatively high lower part and ensures that no cat litter is removed by the cat's soiled paws. The device shown is intended for multiple use and cannot be folded together.

The disposable constructions known in the state of the art cause relatively high costs for the consumer and lead to an increased amount of material being used. This is connected in particular with the fact that the lower and top parts of the lavatory are connected firmly together and cannot be separated from one another without destroying the entire lavatory construction. The conventional reusable lavatories, on the other hand, consist, in most cases, of two separate parts and take up a relatively large amount of space both during transport and during storage. Furthermore, when disposing of the soiled pet litter, the entire device has to be transported and, if the hood is removed, there can not only be unintentional contact with the pet's faeces but small particles can also be thrown up, and germs can be spread.

If only parts of the soiled animal litter are removed, it is necessary, in the case of conventional, commercially available disposable lavatories, to open up the hood construction completely in order to reach the litter. In the context of the known disposable lavatories, the minimum height of the folded lavatory is determined, even in the unused state, by the desired height of the lavatory tray portion, because, if it were possible to fold the lavatory together in this area, it might result in the lavatory's not being adequately sealed.

The object of the invention is to overcome these disadvantages which are present in the prior art.

In accordance with the invention, this object is achieved by a hood consisting of at least two side walls and a cover plate for use with a disposable or reusable lavatory tray for pets wherein the hood can be reversibly attached to the lavatory tray or the lavatory tray can be inserted into the hood, and the hood can be folded together into a flat position.

In a particularly preferred embodiment, the hood is characterised by the fact that it has a base plate.

In particular, the hood is characterised by the fact that at least one wall of the hood is firmly connected both to the cover plate and to the base plate, and the remaining wall(s) is/are firmly connected either to the cover plate or to the base plate. Various embodiments of the hood according to the invention are thus conceivable. A hood is preferred in which two mutually opposing walls are connected both to the cover plate and to the base plate. The remaining two walls, on the other hand, are only connected to the base plate, so that it is possible, after these walls have been unfolded, to swing them outwards in order to insert the disposable or reusable lavatory tray. Once the lavatory tray has been inserted into the hood, the walls are connected to the cover plate by means of a suitable mounting device. Alternatively, it is conceivable that the two walls which, in the previous example, were only connected to the base plate are now connected solely to the cover plate. This makes it possible, by simply folding up these walls, to open the hood far enough for the lavatory tray to be slid in with no difficulty. In a further embodiment, it is provided for one of the walls to be connected to the base plate and the other wall to be connected to the cover plate, so that the lavatory tray can be inserted either by folding

down the wall which is attached solely to the base plate, or alternatively by slightly folding up the wall which is attached solely to the cover plate.

The hood is preferably characterised by the fact that at least one wall of the hood in each case has at least one horizontal, centrally positioned crease. It is particularly preferred for it to be possible for the wall to buckle inwards at the horizontal, centrally positioned crease so that, first of all, the hood can be supplied in the folded state and, secondly, it is possible to fold the hood up when disposing of the animal litter. In a preferred embodiment, the walls which do not have creases of this kind are folded inwards in their entirety in this case.

In a particularly preferred embodiment, at least two walls of the hood each have at least one horizontal crease positioned near the base plate. The walls can preferably be made to buckle inwards at the horizontal crease. This feature makes it possible, when a disposable lavatory tray located in the hood is used for example, to cause the walls to buckle inwards just above the disposable lavatory tray at the creases provided and thus to fold the hood together. In this way, it becomes possible to dispose of the animal litter in the disposable lavatory tray in a space-saving way by folding the hood together, or, if a reusable lavatory tray is used, to avoid any direct contact with the pet's faeces during transport to the refuse container where the litter is disposed of. In order to guarantee this, if all four walls are firmly mounted on the base plate, they may all have the above-mentioned, horizontal creases positioned near the base plate. If, however, an embodiment is used in which not all four walls are firmly anchored to the base plate, the creases for the walls which can be folded upwards, because they are attached to the cover plate, are not needed.

In one embodiment, the hood is characterised by the fact that the walls which are firmly connected to either the cover or the base plate can be folded inwards and outwards.

In addition, the hood is characterised by the fact that the folded-up walls which are firmly connected to either the cover or the base plate are attached by a suitable means to the plate with which they have no firm connection. The walls preferably have projections which lock into recesses in the plate to which they are not firmly connected.

In a particularly preferred embodiment, the walls which are firmly connected to either the cover or the base plate are moved an appropriate distance into the interior of the hood. An appropriate distance is defined as meaning that it allows the hood to be sufficiently stabilised. As a rule, this distance will be in the centimetre range (0.5 – 10 cms) and will account for between 1 and 10 % of the length of the hood. The walls which are connected to either the cover or the base plate preferably have an overlapping, folding wall portion. When the hood is erected, this wall portion buckles outwards, so that it ends up lying flat against the other wall, which stands at right angles to the first wall or/and to the base plate/cover plate. This provides excellent stabilisation and, if desired, additional fastening elements can be attached.

In addition, the side walls which are firmly connected to either the cover or the base plate have devices by means of which they are folded up when the hood is erected. These devices can also take the form of recesses in the corresponding walls, for example.

In an alternative embodiment, the hood is characterised by the fact that all the walls of the hood are firmly connected to the cover plate.

In particular, the hood is characterised by the fact that all the walls of the hood have horizontal creases. In this case, two mutually opposing walls of the hood can be bent inwards along the creases, and the two walls at right angles to them can be bent outwards along the creases. The walls of the hood which are bent outwards can preferably also be bent inwards, when folded together, in such a way that they are lying on the folded-up hood. It is particularly preferable for the hood of the invention to be attached to the lavatory tray by a suitable fastening means, the fastening means comprising Velcro fasteners, adhesive fasteners, push-on strips, push-on frames, press-stud connections, riveted connections, punched connections, clamps, clasps, clips, zip fasteners, seams, plug-in connections and fastening by means of wedging, perforating and folding.

In one embodiment, the hood is slid onto the lavatory tray. This can be done, for example, by forming a curved flange which can receive the corresponding flange of the hood or the lavatory tray, or by having smooth flanges on top of one another which are fastened by means of a push-on strip.

The hood of the invention is characterised by the fact that the cover plate has a device along which the hood is pulled up while the lavatory is being erected. This device can consist, *inter alia*, in recesses which facilitate pulling up the hood while the lavatory is being erected. In a further preferred embodiment, the hood is stabilised, in the unfolded position, at at least one corner where two walls meet. This stabilisation is achieved with the aid of a suitable fastening means comprising Velcro fasteners, adhesive fasteners, push-on strips, press-stud connections, riveted connections, punched connections, clamps, clasps, clips, zip fasteners, seams, plug-in connections and fastening by means of wedging, perforating and folding.

It is most particularly preferred for the hood of the invention to have, in at least one wall, a sufficiently large opening for the pet to pass through.

The walls of the hood preferably have a flange in the lower portion. This flange preferably points inwards and thus makes it possible for the hood to terminate directly against the lavatory pan. This means that it is not necessary to use only lavatory trays of specific dimensions.

The hood of the invention is preferably characterised by the fact that it is rectangular or square in cross-section.

In a further embodiment, the hood is characterised by the fact that it consists substantially of cardboard and/or plastic or a composite material and/or of a combination of different materials.

The invention also relates to a pet lavatory with a hood according to the invention.

A preferred embodiment of the present invention is shown in the attached drawings.

Fig. 1 shows a perspective representation of a preferred embodiment while the hood is being unfolded.

Fig. 2 to Fig. 4 show perspective views of the hood of the invention while it is being erected.

Fig. 5 shows a perspective view when inserting the lavatory tray.

Fig. 6 shows a perspective view of the hood of the invention shortly before completion of the erection process.

Fig. 7 to Fig. 9 show a perspective view of the hood of the invention while it is being folded up.

The particularly preferred embodiment of the hood of the invention illustrated in Figures 1 to 9 is pulled up by means of a suitable device, taking the form here of central recesses 10. In the process, the two walls 6 unfold, which are firmly anchored both to the cover plate 2 and to the base plate 4. The lateral recesses 20 serve to stabilise and anchor the two walls 26 which remain to be unfolded, and which are only attached to the base plate 4. As becomes clear in Fig. 2, the hood can be unfolded like a concertina thanks to the central crease 8 and is stabilised by means of the two walls 26. As is clear from the last illustrations, the creases 22 serve to provide a further possibility for the walls 6, 26 to buckle. In the embodiment shown here, the walls 26, which are unfolded from the interior of the hood, are moved slightly inwards. They in particular have overlapping wall portions 18, which contribute to providing additional rigidity and thus to stabilising the hood like a frame. With the aid of these overlapping wall portions 18, which lie flat against the walls, different fastening means, which are known in the state of the art, can be used. The walls 26 are in particular unfolded with the aid of suitable recesses 24 or by means of the entry and exit opening 14 in the hood. While these walls 26 are firmly attached to the base plate 4, it is nevertheless possible to fold them outwards from the inside, as becomes clear from Fig. 5. The lavatory tray 16 can be inserted into the hood, which has already been stabilised by three walls 6, 26. After that, the fourth wall 26 is unfolded and, like the first wall 26 which has been unfolded from the inside, it is anchored in the lateral recesses 20 by means of the projections 12. When the animal litter has to be disposed of or the lavatory tray has to be cleaned, the hood can be folded together again for transport or for complete disposal. For this purpose, the creases 22 are bent and the two walls 26 are folded in. With the creases 22 located near the bottom and the creases 8 located in the middle, the walls 6 are bent in and folded together over the first two walls 26. Closed in this way, the hood ensures that the user does not come into direct contact with the faeces or with any dust particles that are thrown up.

The hood, including the lavatory tray, can now be disposed of completely in the form of a disposable system, or it can be used to transport the tray to a refuse container, to remove the lavatory tray there and to dispose of the litter. The preferred embodiment shown in illustrations 1 to 9 provides a hood for a lavatory tray which, on the one hand, can be erected quickly and unproblematically, which can be folded together extremely flat during transport and which, because of the construction with both a cover plate and a base plate, possesses excellent stability.

In an alternative embodiment, particular emphasis is placed on the unproblematic and easy method of unfolding and folding together the hood. This is achieved by pulling the draw member of the cover plate and stabilising the unfolded hood with at least one simple fastening means. No complicated system of folding or plugging together the individual elements is necessary, since, in this preferred embodiment, all four walls are unfolded automatically by the draw exercised and can be folded together again in the same way once the fastening means are removed. Particularly preferred positions for attaching these fastening means are the areas where the walls abut and where, because of the creases, there might be a certain instability. Various fastening means are conceivable for attaching the hood to the lavatory tray, such as those known in the state of the art. Similarly, after it has been erected, the hood can simply be slid onto the lower tray in order to ensure that it is firmly and stably anchored.

The inventive hood for a pet lavatory tray has numerous advantages compared to the state of the art. In the present case, it is not a uniquely disposable product, though it can also be used as such. Instead, depending on the degree of soiling, the hood and the lavatory tray can be in use for different times and both can be replaced with new individual components with no difficulty.

The possibility of independently replacing the hood and lavatory leads to a considerable cost saving for the customer and, compared to the conventional disposable system, it occupies a reduced volume in the refuse container and produces a noticeable reduction in material. The fact that the hood can be folded together saves an enormous amount of space both during transport, storage and disposal. Particularly during transport, the hood can be folded together extremely flat, since there is no minimum height laid down by a "lavatory pan".

The features of the invention disclosed in the above description, and in the claims and drawings, can be essential to implementing the invention in its various embodiments both individually and in any combination.